

STACKABLE CLEANER

BACKGROUND OF THE INVENTION

This invention relates to a combined disposable rigid container and cleaner. More particularly the invention relates to a rigid stackable package including a sealed upper compartment
5 containing a sponge and a quantity of cleaning fluid and a lower compartment surrounded by a skirt accepting the upper compartment of an identical unit whereby multiple units can be stacked into a retail product.

Consumers encounter surfaces they wish to clean on a regular basis. This is especially true when a person is traveling, not at home or away from home. Toilet seats in public restrooms are
10 prime examples. However, other surfaces upon which one sits or places valuable or delicate possessions also fall into this category. One can wipe such surfaces with a tissue but such a procedure is not always satisfactory. Even if one wets a tissue or paper towel and applies soap or another cleaning agent, one is still doing less than optimal cleaning and is likely to get dirt on one's
hand from the tissue or paper towel.

SUMMARY OF THE INVENTION

The present invention provides a relatively rigid applicator body having a horizontal base wall, a downwardly extending skirt, an upwardly extending side wall and a top wall. The horizontal
base wall, the upwardly extending side wall and the top wall define an upper compartment. A compressible foam body sized to extend beyond the upper compartment in a relaxed state is sealed
20 into the upper compartment along with a quantity of cleaning fluid. In one embodiment, the top wall is a sealing film. The sealing film is a sheet sealed around the entire periphery of the upper

compartment and has a tab extending beyond the upper compartment periphery allowing the user to remove the seal when desired. Several of these identical units are stacked and a cap placed over the top unit forming a retail product. The applicator bodies have two long sides and shorter ends with the long sides being gently curved and parallel to one another providing an overall shape for the finished product which is easily carried in a pocket, purse or brief case.

In accordance with the present invention, the applicator body of the product is fabricated from rigid plastic material.

Still further in accordance with the present invention, the foam body contained in the applicator rigid body has a width dimension slightly greater than the width dimension of the compartment in which it is contained whereby a slight interference fit is created.

Still further in accordance with the invention, the foam body is cut from a sheet material giving the foam body blanks a generally rectangular, flat, shape.

Yet further in accordance with the invention, the upwardly extending side wall surrounding the upper compartment has a shoulder at one end creating a contained volume when mated with the skirt of a mating unit, said volume accommodating the tab of the sealing film.

It is the principal object of the present invention to provide a cleaner or applicator product comprising an applicator pad or sponge sealed within a rigid applicator body which can be easily and safely stored, easily opened and in which the applicator body functions as a rigid handle for the sponge in use.

It is another object of the present invention to provide a combined container and cleaner allowing one to use the applicator product to clean a surface without touching the surface or the pad

or sponge during this operation.

It still a further object of the present invention to provide a applicator body which is rigid, durable, not subject to puncture or failure by compression, pleasing in appearance, easy to open, water tight and stackable.

5 It still another object of the present invention to provide a cleaner which is economical to manufacture, pleasing in appearance, easy to carry and easy to use.

These and other objects of the present invention will become apparent to those skilled in the art from the following description taken in conjunction with the accompanying drawings wherein:

FIGURE 1 is a front elevational view of a stackable applicator or cleaner in accordance with
10 the present invention in the ready to use configuration;

FIGURE 2 is a top view of the stackable applicator or cleaner of FIGURE 1;

FIGURE 3 is a side view of the stackable applicator or cleaner of FIGURES 1 and 2;

FIGURE 4 is cross-sectional view of the applicator or cleaner of figures 1-3 taken along line
4-4 of figure 1;

15 FIGURE 5 is a perspective view of the applicator or cleaner of figures 1-4;

FIGURE 6 is a front elevational view of the stackable applicator or cleaner of figures 1-5 in the sealed configuration with the sponge restrained by a sealing film;

FIGURE 7 is a top view of the stackable applicator or cleaner in the sealed configuration;

FIGURE 8 is a side elevational view of the stackable applicator or cleaner in the sealed
20 configuration;

FIGURE 9 is a cross-sectional view of the applicator or cleaner in the sealed configuration

taken along line 9-9 of FIGURE 6;

FIGURE 10 is a perspective view of the applicator or cleaner seen in figures 1-9 in the sealed configuration;

FIGURE 11 is a front elevational view of a stack of applicator or cleaner as seen in figures 1-10 with a cap;

FIGURE 12 is a side elevational view of the stack of figure 11;

FIGURE 13 is a cross-section of the stack of applicator or cleaner seen in figure 11 taken along line 11-11;

FIGURE 14 is a bottom view of the stack of applicator or cleaner seen in figures 11-13;

FIGURE 15 is a top view of the stack of applicator or cleaner seen in figures 11-14;

FIGURE 16 is a perspective view of the stack of applicator or cleaner seen in figures 11-15;

FIGURE 17 is a front elevational view of a stackable applicator or cleaner in accordance with another embodiment of the present invention in the ready to use configuration;

FIGURE 18 is a top view of the stackable applicator or cleaner of FIGURE 17;

FIGURE 19 is a side view of the stackable applicator or cleaner of FIGURES 17 and 18;

FIGURE 20 is cross-sectional view of the applicator or cleaner of figures 17-19 taken along line 20-20 of figure 17;

FIGURE 21 is a perspective view of the applicator or cleaner of figures 17-21;

FIGURE 22 is a front elevational view of the stackable applicator or cleaner of figures 17-20 in the sealed configuration with the sponge restrained by a top;

FIGURE 23 is a top view of the stackable applicator or cleaner of Fig. 17 in the sealed

configuration;

FIGURE 24 is a side elevational view of the stackable applicator or cleaner of Fig. 17 in the sealed configuration;

FIGURE 25 is a cross-sectional view of the applicator or cleaner of Fig. 17 in the sealed configuration taken along line 25-25 of FIGURE 22;

FIGURE 26 is a perspective view of the applicator or cleaner seen in Figures 17-25 in the sealed configuration;

FIGURE 27 is an exploded perspective view similar to FIGURE 26 showing the components of the applicator or cleaner in Figures 17-26;

FIGURE 28 is an enlarged detail view of the top of the sidewall, the top and the tab of the applicator or cleaner seen in Figures 17-27;

FIGURE 29 is a front elevational view of a stack of applicators or cleaners as seen in figures 17-28 with a cap;

FIGURE 30 is a side elevational view of the stack of figure 29;

FIGURE 31 is a cross-section of the stack of applicators or cleaners seen in figure 29 taken along line 31-31;

FIGURE 32 is a bottom view of the stack of applicators or cleaners seen in figures 29-31;

FIGURE 33 is a top view of the stack of applicators or cleaners seen in figures 29-32; and,

FIGURE 34 is a perspective view of the stack of applicators or cleaners seen in figures 29-33.

PREFERRED EMBODIMENT

Referring now to the drawings wherein the showings are for the purposes of illustrating

preferred embodiments of the invention and not for the purposes of limiting same, figure 1 shows a cleaner or applicator unit 10 in accordance with the invention. The applicator unit 10 comprises an applicator rigid body 12, a foam body 14 and a quantity of fluid 16 absorbed in the foam body 14. Alternatively, the fluid 16 can be a gel or paste for use in cleaning or other applications such as polishing. Referring now to figure 4, the applicator rigid body 12 comprises a horizontal wall 20, a skirt 22 extending downwardly from the horizontal wall 20 and surrounding a lower compartment 24, and an upwardly extending wall 26 surrounding an upper compartment 28 in which the foam body 14 is partially disposed. As can be seen in figure 2, the rigid body 12 has a slightly concave front 32, a slightly convex back 34, an arcuate left end 36 and an arcuate right end 38. The front 32 and back 34 are generally parallel to one another. The applicator rigid body 12 is slightly greater than 2.5 inches wide from the left end 36 to the right end 38 and approximately one half inch deep from the outside of the front 32 to the back 34. The overall depth dimension is somewhat greater than one half inch because the front wall and back wall are both curved. The skirt 22 has a generally uniform profile extending uniformly across the front 32, the back 34, the left end 36 and the right end 38 of the applicator rigid body 12. The skirt profile is a generally planar downwardly extending wall with a slight amount of draft to accommodate the manufacturing process, injection molding. Five bumps 42 protrude from the outer surface of the front of the skirt near its bottom center. Similarly, five bumps 44 protrude from the outer surface of the center of the back 34 near its bottom. The bumps 42, 44 are tactile cues easing gripping of the applicator rigid body 12 by a user.

The upwardly extending wall 26 has a generally uniform profile across the front 32, around the left end 36 and across the back 34. The profile of the upwardly extending wall is that of a wall

having two generally planar sides slightly tapering toward one another in the upward direction to accommodate the injection molding process. Three vertically orientated ridges 46 are provided near the bottom of the center of the front of the outside surface of the upwardly extending wall. Similarly, three ridges 48 are provided on the outer lower surface of the back of the upwardly extending wall

5 26.

The right end of the upwardly extending wall 26 has a profile differing from the remaining portions of the upwardly extending wall 26. The right end profile has a short bottom portion 52 extending generally vertically, an inwardly extending sloped shoulder portion 54 and an upper vertically extending portion 56.

10 An upwardly extending ridge 50 is provided at the lower extremity of the outside surface of the left end of the upwardly extending wall 26. An identical ridge 51 is provided on the bottom of the right shoulder 52. The top edge 58 of the upwardly extending wall 26 is flat and smooth around its entire periphery.

The foam body 14 conforms to the shape of the upper compartment 28. Preferably, the foam

15 body 14 is a rectangular piece of foam or sponge cut from sheet material. In the preferred embodiment, the sheet material is approximately a quarter of an inch thick, slightly thicker than the width of the upper compartment 28. The foam body 14 is placed in the upper compartment 28 and, preferably, is adhered to the top of the horizontal wall 20. As can be seen in figures 1-5, and 17 when the foam body 14 uncompressed, it extends beyond the top edge 58 of the applicator rigid body

20 12. In this configuration, a consumer can grasp the applicator rigid body 12 and use it to clean a surface by rubbing the portion of the foam body 14 extending from the upper compartment 28 over

the surface. The fluid 16 or gel, which is preferably an isopropanol solution, cleans the surface in question.

Prior to use, the foam body is retained completely within the upper compartment 28. Referring now to figures 6-10, the cleaner or applicator 10 is shown in the sealed configuration. A top wall, in this embodiment, a sealing film 60, extends over the top of the upper compartment 28 of the applicator rigid body 12. The sealing film 60 is sealed to the top edge 58 of the upwardly extending wall 26. While the sealing film 60 can be fixed to the top edge 58 by any suitable means, it is preferred to heat seal the sealing film 60 to the top edge 58. Heat sealing materials and techniques are well known in the industry and widely used on food containers (e.g. yogurt containers) and are readily available in commerce. The sealing film 60 has a closure portion 62 and a tab 64. The closure portion 62 is identical in shape to the top edge 58 of the upwardly extending wall 26 surrounding the upper compartment 28. The tab 64 extends outwardly from the closure portion 62 at the right end 38 of the applicator 12. The tab 64 is bent downwardly and lays along the right end 38 of the upwardly extending wall 26. As can be seen in figure 6, because the right end of the upwardly extending wall 26 includes a shoulder portion 54, there is room for the tab 64.

Referring now to figure 9, one sees that the upper compartment 28 is surrounded by the horizontal wall 20, the upwardly extending wall 26 and the sealing film 60 creating a hermetically sealed compartment. The foam body 14 and a fluid 16 or gel are contained within the sealed upper compartment 28. The fluid or gel 16 can not evaporate.

A plug or stopper can be used in place of the sealing film 60. The stopper, not shown, has a flat, horizontal surface having a shape identical to the inner edge of the upwardly extending wall

26 plus a tab extending above the shoulder 54. A stopper skirt extends downwardly from the stopper horizontal surface and engages the inside of the upwardly extending wall 26. A horizontal ridge extends around the periphery of the skirt and engages a mating recess in the inside surface of the upwardly extending wall 126, holding the stopper in place. The upper compartment is opened by grasping the tab and removing the stopper. The stopper is, in effect, a removable top wall just as the film 60 is a removable top wall.

Referring now to figures 11-13, a stack of four identical cleaners or applicators 10a, 10b, 10c, 10d in the sealed condition is illustrated. The stack of cleaners is shown in cross section in figure 13. It can be seen that the upwardly extending wall 26 of the lowest unit extends into and is surrounded by the downwardly extending skirt 22 of the next higher unit. This is true for each of the units save the topmost unit. For the topmost unit, the upwardly extending wall 26 is contained within a cap 70. The cap 70 comprises a horizontal wall 72 and a downwardly extending skirt 74. The horizontal wall 72 is identical to the horizontal wall 20 of the applicator body 12. The skirt 74 is identical to the skirt 22 of the applicator body 12. Thus, the upwardly extending wall 26 of the top most unit 10d extends into and is surrounded by the skirt 74 of the cap 70. In this nested configuration, the ridges 46, 48, 50, 51 on the outside of the upwardly extending wall 26 wedge against the inner surface of the skirt 22 of the next higher unit holding the ensemble together.

As can be seen in figures 1, 6, and 11, the bottom edge 80 of the skirt 22 is not straight and flat. Rather, the bottom edge of the left end and right end of the skirt 22 are flat and the bottom edge of the front and back of the skirt are slightly concave. This shape is matched by the top edge 82 of the skirt so that adjacent applicators 10a, 10b, 10c and 10d mate together with an aesthetically

pleasing close edge and a central curve.

The assembled multi-unit stack of applicator or cleaner units 10a-10d with the cap 70 is sold as a unit and is conveniently packable by the consumer. The entire assembly is only slightly greater than four inches in height, two and two-thirds inch in width and two thirds inches thick. Moreover, the sidewalls of the entire stack of unit are curved and conveniently rest in a person's pocket. Applicator rigid bodies 12 are rigid and nested. The sealed upper compartments 28 containing the fluid or gel are well protected. Two rigid walls, the upwardly extending wall 26 and the skirt of an adjacent unit 22 or of the cap 74, protect each upper compartment 28. The upper compartments are therefore exceedingly unlikely to be compressed to bursting or to be punctured as might be the case of a moistened wipe packed in foil envelope.

In use, a consumer buys the commercial stack as shown in figures 11-14 and places the stack in a pocket, purse or other carry bag. When the consumer encounters a surface to be cleaned, he simply removes the bottom unit 10a or top unit 10d (replacing the cap on the remaining units). He can put the remaining units away and pull the tab 64 to remove the top film 60 on the selected applicator or cleaner unit 10. This releases the foam body 14 which extends outwardly from the top of the upper compartment 28 and is available for swabbing the intended surface. The user can swab the surface while maintaining a sure grip on the applicator rigid body 12. The applicator 10 is then discarded in a convenient receptacle and the fluid or gel solution used to swab the selected surface evaporates.

The unit 10 described above is manufactured by injection molding an appropriate plastic such as polypropylene into the applicator rigid body 12 and cap 70. Adhesive is applied to the top surface

of the horizontal wall 20 or the bottom surface of the foam body 14 and the foam body 14 inserted into the upper compartment 28. Fluid or gel 16 is applied to the foam body 14 and the sealing film 60 applied over the foam body 14 compressing it into the upper compartment 28 bringing the sealing film closure portion 62 into contact with the top edge 58 of the upwardly extending wall 26. The sealing film 60 is then sealed to the top edge 58 by known heat sealing techniques. A completed unit 10 is thus manufactured. Several of the unit are then stacked as seen in figure 11 and packaged for sale at retail. Of course, fluids, gels and pastes other than cleaning fluids can be used. Surface treatments such as vinyl protectors, shoe polishes, topical medications, or other materials can be applied to the foam body 14 and sealed into the upper compartment 28. A clean, and if needed, sterile product applicator is provided in a convenient multiple unit package.

Another embodiment of the invention is shown in Figures 17-34. Referring to Figure 17, the applicator unit 110 comprises a applicator rigid body 112, a compressible foam body 114 and a quantity of fluid 116 absorbed in the foam body 114. Alternatively, the fluid 116 can be a gel or paste for use in cleaning or other applications such as polishing. Referring now to figure 20, the applicator rigid body 112 comprises a horizontal base wall 120, a skirt 122 extending downwardly from the horizontal base wall 120 and defining a lower compartment 124, and an upwardly extending wall 126 defining an upper compartment 128 in which the foam body 114 is partially disposed. The horizontal base wall is fabricated as a separate piece and ultimately jointed to the skirt 122 and upwardly extending wall 126 as will be described hereinafter.

As can be seen in figure 18, the rigid body 112 has a slightly concave front 132, a slightly convex back 134, an arcuate left end 136 and an arcuate right end 138. The front 132 and back 134

are generally parallel to one another. The applicator rigid body 112 is slightly greater than 2.5 inches wide from the left end 136 to the right end 138 and approximately one half inch deep from the outside of the front 132 to the back 134. The overall depth dimension is somewhat greater than one half inch because the front wall and back wall are both curved. The skirt 122 has a generally uniform profile extending uniformly across the front 132, the back 134, the left end 136 and the right end 138 of the applicator rigid body 112. The skirt profile is a generally planar downwardly extending wall with a slight amount of draft to accommodate the manufacturing process, injection molding. Five bumps 142 protrude from the outer surface of the front of the skirt near its bottom center. Similarly, five bumps 144 protrude from the outer surface of the center of the back 134 near its bottom. The bumps 142, 144 are tactile cues easing gripping of the applicator rigid body 112 by a user.

The upwardly extending wall 126 has a generally uniform profile across the front 132, around the left end 136 and across the back 134. The profile of the upwardly extending wall is that of a wall having two generally planar sides slightly tapering toward one another in the upward direction to accommodate the injection molding process. Two vertically orientated ridges 146 are provided near the bottom of the front of the outside surface of the upwardly extending wall. Similarly, two ridges 148 are provided on the outer lower surface of the back of the upwardly extending wall 126.

The right end of the upwardly extending wall 126 has a profile differing from the remaining portions of the upwardly extending wall 126. The right end profile has a short bottom portion 152 extending generally vertically, and an inwardly extending sloped shoulder portion 154. An upwardly extending ridge 150 is provided at the lower extremity of the outside surface of the right end of the

upwardly extending wall 126. An identical ridge 151 is provided on the bottom of the right shoulder 152. The top edge 158 of the upwardly extending wall 126 is open in the configuration seen in Figures 17-21.

The foam body 114 conforms to the shape of the upper compartment 128. Preferably, the foam body 114 is a rectangular piece of foam or sponge cut from sheet material. In the preferred embodiment, the sheet material is approximately a quarter of an inch thick, slightly thicker than the width of the upper compartment 128. The foam body 114, preferably, adhered to the top of the horizontal wall 120. As can be seen in figures 17-21, when the foam body 114 uncompressed, it extends beyond the top edge 158 of the applicator rigid body 112. In this configuration, a consumer can grasp the applicator rigid body 112 and use it to clean a surface by rubbing the portion of the foam body 114 extending from the upper compartment 128 over the surface. The fluid 116 or gel, which is preferably an isopropanol solution, cleans the surface in question.

Prior to use, the foam body is retained completely within the upper compartment 128. Referring now to figures 22-27, the cleaner or applicator 110 is shown in the sealed configuration. A top wall 160 extends over the top of the upper compartment 128 of the applicator rigid body 112. The top wall 160 is fixed to the top edge 158 of the upwardly extending wall 126. The top wall 160, the upwardly extending wall 126 and the skirt 122 are integrally formed in an injection molding process. The top wall 160 is joined around its entire periphery to the top edge 158 of the upwardly extending wall 126 by a very thin web 166, a portion of which is seen in Figure 28. The top wall 160 has a closure portion 162 and a tab 164. The closure portion 162 is identical in shape to the top of the upper compartment 128 and closes the top completely. The tab 164 extends outwardly from the

closure portion 162 at the right end 138 of the applicator 112. The tab 164 extends outwardly over the shoulder 154 at right end 138 of the upwardly extending wall 126. As can be seen in figure 26, because the right end of the upwardly extending wall 126 includes a shoulder portion 154, there is room for the tab 164.

5 Referring now to figure 25, one sees that the upper compartment 128 is enclosed by the horizontal wall 120, the upwardly extending wall 126 and the top wall 160 creating a hermetically sealed compartment. The foam body 114 and a fluid 116 or gel are contained within the sealed upper compartment 128. The fluid or gel 116 can not evaporate.

10 Referring now to figures 29-31, a stack of four identical cleaners or applicators 10a, 10b, 10c, 10d in the sealed condition is illustrated. The stack of cleaners is shown in cross section in figure 31. It can be seen that the upwardly extending wall 126 of the lowest unit extends into and is surrounded by the downwardly extending skirt 122 of the next higher unit. This is true for each of the units save the topmost unit 110d. For the topmost unit, the upwardly extending wall 126 is contained within a cap 170. The cap 170 comprises a horizontal wall 172 and a downwardly
15 extending skirt 174. The horizontal wall 172 is identical in shape to the horizontal wall 120. The skirt 174 is identical to the skirt 122 of the applicators 110. Thus, the upwardly extending wall 126 of the top most unit 110d extends into and is surrounded by the skirt 174 of the cap 170. In this nested configuration, the ridges 146, 148, 150, 151 on the outside of the upwardly extending wall 126 wedge against the inner surface of the skirt 122 of the next higher unit holding the ensemble
20 together.

As can be seen in figures 17, 21, and 29, the bottom edge 180 of the skirt 122 is not straight

and flat. Rather, the bottom edges of the left end and right ends of the skirt 122 are flat and the bottom edges of the front and back of the skirt are slightly concave. This shape is matched by the top edge 182 of the skirt so that adjacent applicators 110a, 110b, 110c and 110d mate together with an aesthetically pleasing close edge and a central curve.

5 The assembled multi-unit stack of applicator or cleaner units 110a-110d with the cap 170 is sold as a unit and is conveniently packable by the consumer. The entire assembly is only slightly greater than four inches in height, two and two-thirds inch in width and two thirds inches thick. Moreover, the sidewalls of the entire stack of unit are curved and conveniently rest in a person's pocket. Applicator rigid bodies 112 are rigid and nested. The sealed upper compartments 128
10 containing the fluid or gel are well protected. Two rigid walls, the upwardly extending wall 126 and the skirt of an adjacent unit 122 or of the cap 174, protect each upper compartment 128. The upper compartments are therefore exceedingly unlikely to be compressed to bursting or to be punctured as might be the case of a moistened wipe packed in foil envelope.

 In use, a consumer buys the commercial stack as shown in figures 29 and 34 and places the
15 stack in a pocket, purse or other carry bag. When the consumer encounters a surface to be cleaned, he simply removes the bottom unit 110a or top unit 110d (replacing the cap on the remaining units). He can put the remaining units away and pull the tab 164 to tear the web joining the top wall 160 to the upwardly extending wall 126, on the selected applicator or cleaner unit 110. This separates the top wall 160 from the rigid body 112 and releases the foam body 114 which extends outwardly from
20 the top of the upper compartment 128 and is available for swabbing the intended surface. The user can swab the surface while maintaining a sure grip on the applicator rigid body 112. The applicator

110 is then discarded in a convenient receptacle and the fluid or gel solution used to swab the selected surface evaporates.

The unit 110 described above is manufactured by injection molding of the rigid components, namely, the two part applicator body 112 and the cap 170. With reference to Figures 27 and 25, the rigid body 112 comprises a first component 190 and a separate horizontal wall 120. The first component is a unitary injection molded part including the top wall 160, tab 164, upwardly extending wall 126 and skirt 122. It is continuous and, except for the bottom opening, water tight. The horizontal wall 120 is a unitary injection molded part having a central planar portion 192 surrounded by an upwardly extending flange 194 and an outwardly extending flange 196. A vertical stub 197 extends upwardly from the center of the central planar portion 192. The stub 197 is a short, flat stub extending transversely across the central planar portion 192. Two round bases 198, 199, Figure 32, extend downwardly from the bottom of the central planar portion 192, one on each side of the stub 197. These elements are assembled as follows: adhesive 195 is applied to the side of the horizontal wall 120 central planar portion 192 facing the foam body 114. The foam body, which has a transverse slit 118 across its center is brought into contact with the horizontal wall 120 and fixed to it by the adhesive 195. A charge of selected fluid 116 such as isopropyl alcohol, is charged into the foam body 114 or into the inverted first component 190. The horizontal wall 120 and foam body are inserted into the first component 190. The flanges 194, 196 abut against ridges formed inside the first component where the upwardly extending wall 126 joins the skirt 122. The horizontal wall 120 is welded to the first component around its entire periphery sealing the upper compartment 128. The flanges 194, 196 provide necessary rigidity, surface area and mass for achieving a good welded seal.

The foam body 114 and fluid 116 are thus sealed in the upper compartment and the fluid can not evaporate away.

The bosses 198, 199 provide an alternate filling method. The first component 190, foam body 114 and horizontal base wall 120 can be assembled without the fluid 116. After assembly and welding, fluid 116 can be injected through one of bosses 198, 199 while the other boss is penetrated with a venting needle. After charging of the compartment, the bosses are heat sealed, creating a fluid tight upper compartment 128. A completed unit 10 is thus manufactured.

Several of the units are then stacked as seen in figure 34 and packaged for sale or retail. Of course, fluids, gels and pastes other than cleaning fluids can be used. Surface treatments such as vinyl protectors, shoe polishes, topical medications, or other materials can be applied to the foam body 114 and sealed into the upper compartment 128. A clean, and if needed, sterile product applicator is provided in a convenient multiple unit package.

While considerable emphasis has been placed herein on the structure of the preferred embodiments and the structural interrelationships between component parts of the preferred embodiments, it will be appreciated that many changes in these embodiments herein illustrated and described can be made without departing from the principles of the invention. Accordingly, it is to be distinctly understood that the foregoing descriptive matter is to be interpreted merely as illustrative of the preferred embodiments and not as a limitation.